



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,850	02/27/2004	Vincent J. Gatto	AN-7421	6851
7982	7590	10/24/2007		
EDGAR SPIELMAN ALBEMARLE CORPORATION 451 FLORIDA BLVD. BATON ROUGE, LA 70801			EXAMINER OH, TAYLOR V	
			ART UNIT 1625	PAPER NUMBER
			MAIL DATE 10/24/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/788,850	<b>Applicant(s)</b> GATTO ET AL.	
	<b>Examiner</b> Taylor Victor Oh	<b>Art Unit</b> 1625	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 August 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) 50-68 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-49, 69 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Final Rejection***

**The Status of Claims**

Claims 1- 69 are pending.

Claims 1-49 and 69 are rejected.

Claims 50-68 are withdrawn from consideration.

**Claim Rejections - 35 USC § 112**

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The rejection of Claims 1-4, and 7-37 under 35 U.S.C. 112, first paragraph has been withdrawn due to the modification made in the claims.

The rejection of Claims 38-49 under 35 U.S.C. 112, first paragraph, has been withdrawn due to the modification made in the claims.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The rejection of Claims 1-4, 7-37 and 43-49 under 35 U.S.C. 112, second paragraph has been withdrawn due to the modification made in the claims.

**Claim Rejections-35 USC 103**

1. Applicants' argument filed 8/15/07 have been fully considered but they are not persuasive.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**The rejection of Claims 1-49 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haeberli et al (U.S. 4,228,297) in view of Grant et al (Chemical Dictionary, 1990, p. 11-12).**

The rejection of Claims 1-49 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haeberli et al (U.S. 4,228,297) in view of Grant et al (Chemical Dictionary, 1990, p. 11-12) has been maintained for the reasons of the record on 6/1/07.

### **Applicants' Argument**

2. Applicants argue the following issues:
  - a. In the claims 28 and 31, the first and second catalysts are the same, which is not disclosed in the Haeberli et al ;
  - b. In claim 69, the claim requires a single catalyst to form a hindered pheolic alkylester; also, the phrase "consisting essentially of" in the claim does not allow the addition of ethyl alcohol to the process shown in the prior art;
  - c. There is no motivation or suggestion in the Haeberli et al to use acids other than acetic acid in combination with Grant et al ;
  - d. there is no suggestion that the acid is added to neutralize the catalyst residues; furthermore, acidifying the reaction mixture with glacial acetic acid does not form a precipitated salt.

Applicants' arguments have been noted, but the arguments are not persuasive.

First, regarding the first and second arguments, the Examiner has noted applicants' argument. However, on the contrary to applicants' argument, the Haeberli et al expressly teaches that the first and second catalysts are the same as described below (see col. 9, lines 1-4):

The second alkaline catalyst may be selected from the classes of compounds listed above for the first alkaline catalyst, i.e., alkali metal hydrides, alkali metal alkoxides of Formula VI or alkali metal amides of Formula

Furthermore, this means that the Haeberli et al requires the single catalyst to form a hindered phenolic alkylester as shown in the above.

Regarding the use of the phrase "consisting essentially of" in the claim languages, the MPEP 2111.03[R-3] defines in the following: the **consisting essentially of** claim occupies a middle ground between closed claims that are written in a consisting of format and fully open claims that are drafted in a comprising format. This implies that there is a room for other material to be present in the claim 69; this can be the organic solvent such as ethyl alcohol seen from the prior art. Therefore, the prior art is still relevant to the claimed invention.

Secondly, regarding the third and fourth arguments, the Examiner has noted applicants' argument. However, the acetic acid has the same function as the phosphoric acid in the claimed process with respect to the role of the acid in the neutralization step; regardless of the type of the acid to be used, the only role of the acid is to neutralize the base in the process. Furthermore, the phosphoric acid is one of the well-known acids in the art as shown in Grant et al (Chemical Dictionary, 1990, p. 11-12). Therefore, it would have been obvious to the skilled artisan in the art to be motivated to use the phosphoric acid as an alternative to acetic acid for the neutralization step in the prior art process. This is because the skilled artisan in the art

Art Unit: 1625

would expect such a modification to be feasible and successful as shown in the prior art.

Moreover, regarding the failure of glacial acetic acid to form the precipitated salt, regardless of forming the precipitated salt by using glacial acetic acid, the Haeberli et al does disclose the removal of the catalyst in the following passages of the steps(see col. 10 ,lines 29-62):

- three hours. The vacuum was then released with nitrogen, and the reaction mass was cooled to 70° C. and acidified with 3.0 g of glacial acetic acid. 132 g of ethyl alcohol were added to the melt, and the resultant solution was clarified. The filtrate was cooled to 28° C. and seeded with 0.5 g of thio-bis-{ethylene-3-(3,5-di-t-butyl-4-hydroxyphenyl)propionate}.
- 5 The reaction product crystallized and the resulting slurry was cooled to 16° C. The product was isolated on a Buchner funnel, washed with cold ethyl alcohol, sucked dry and dried in a vacuum oven at 50° C. to a constant weight. 97.0 g of dry thio-bis- {ethylene-3-(3,5-di-t-butyl-4-hydroxyphenyl)propionate} were obtained; m.p. 71.5° C.; yield 75.4%, based on the thiodiglycol employed.

From this passage, it shows that, after the reaction mixture being acidified with acetic acid, the filtrate is cooled to promote the precipitation of the reaction product; the product was isolated on the funnel by washing with cold ethyl alcohol. This means that the salt of the catalyst can be removed by the filter. Therefore, the prior art process is still relevant to the claimed invention.

### Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 1625

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taylor Victor Oh whose telephone number is 571-272-0689. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres can be reached on 571-272-0867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 1625

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

\*\*\*

  
TAYLOR VICTOR OH  
PRIMARY EXAMINER

10/20/07